

## **REMARKS**

In the Office Action, claims 1-9 were rejected. By this Reply and Amendment, claim 1 has been amended; claim 2 has been canceled without prejudice; non-elected claims 10-25 remain canceled; and claims 1, 3-9 remain pending in the application. No new matter has been added. All claim amendments are fully supported throughout the written description and the figures of the application.

In the Office Action, claims 1-5 and 7-9 were rejected under 35 USC 102(b) as anticipated by the Ramakrishnan et al. reference, US Patent No.: 5,992,519. This rejection is respectfully traversed; however independent claim 1 has been amended to clarify the claim language.

The Ramakrishnan et al. reference discloses a method for exercising control over a reservoir using a reservoir model. The method comprises obtaining a reservoir model, using the reservoir model in determining production strategy, producing fluids according to the production strategy, monitoring the production, adjusting controls, and updating the reservoir model. (See column 2, lines 1-13). As fluid is produced according to the production strategy, fluid flow rates are monitored by sensors and control valves are adjusted to maintain the flow rates at desired values. (See column 2, lines 41-49).

In the Ramakrishnan et al. methodology, a reservoir model is used to help determine the production strategy. The reservoir model uses values input to the reservoir model to represent formation properties, and those formation property values are obtained through data collected from seismic tools, sonic electromagnetic tools, NMR nuclear tools, and other logging tools 20, as well as from analysis of core samples. Formation fluid properties, geological information and petrophysics information, e.g. an "interpretation" of permeability, also may be entered into the reservoir model to help establish the production strategy. (See column 3, lines 17-34). According to the description in the Ramakrishnan et al. reference, interpretations of permeability as well as other petrophysics information may be entered into the reservoir model, however the

reference does not teach the use of actual wellbore measurements to determine a permeability profile. Accordingly, Applicant strongly disagrees with the assertion on page 2 of the Office Action that the Ramakrishnan et al. reference teaches such a determination. The statement that "a permeability profile is determined (see col. 3, lines 30-35)" (see page 2 of the Office Action) is not supported by the actual language and teaching found in column 3, lines 30-35, of the cited reference.

Furthermore, the Ramakrishnan et al. reference teaches monitoring of flow rates and the adjustment of control valves to maintain desired flow rates. (See column 4, lines 12-23). The reference further discloses relationships between pressure and flow rate in providing a methodology for obtaining the desired flow rates. (See, for example, column 4, lines 28-47). Accordingly, the Ramakrishnan et al. reference fails to disclose elements of the presently pending claims.

By way of specific examples, the Ramakrishnan et al. reference fails to disclose or suggest obtaining pressure measurements "along a wellbore during flowing of the well without intervening in the well" and then using this interventionless pressure data in a model to determine "a distribution of a permeability profile in the vicinity of the well" as recited in amended, independent claim 1.

Remaining claims 3-5 and 7-9 ultimately depend from independent claim 1 and recite additional elements. Accordingly, the rejection of claims 3-5 and 7-9 should be withdrawn for the reasons provided above with respect to independent claim 1 and for the additional subject matter recited in these dependent claims.

Claim 6 was rejected under 35 USC 103(a) as unpatentable over the Ramakrishnan et al. reference in view of the Tubel et al. reference, US Publication No.: 2001/0023614. This rejection is respectfully traversed, and reconsideration of the rejection is requested. Claim 6 ultimately depends from amended, independent claim 1 and recites additional elements. Accordingly, the rejection of claim 6 should be withdrawn for the reasons provided above with respect to independent claim 1 and for the additional subject matter recited in this dependent

claim. The Tubel et al. reference fails to obviate the deficiencies of disclosure found in the Ramakrishnan et al. reference as discussed above with respect to independent claim 1.

Accordingly, no prima facie case of obviousness can be established, and Applicant respectfully requests withdrawal of the rejection under 35 USC 103(a).

In view of the foregoing remarks, all pending claims are believed to be in condition for allowance. However, if the Examiner believes certain amendments are necessary to clarify the present claims or if the Examiner wishes to resolve other issues by way of a telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'RtA VS', written over a horizontal line.

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